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12 UNITED STATES DISTRICT COURT FOR THE
13 NORTHERN DISTRICT OF CALIFORNIA
14 SAN FRANCISCO DIVISION

15 In re ATM FEE ANTITRUST LITIGATION

16 Case No. C 04 2676 CRB

17 CLASS ACTION

18 DECLARATION OF RICHARD
19 SCHMALENSEE

20 Date: October 5
21 Time: 10:00 AM
21 Courtroom: 8

22 Honorable Charles R. Breyer

23 Relates to All Actions

24

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1 **I. INTRODUCTION AND SUMMARY OF CONCLUSIONS**

2 1. I have been asked to address the efficiencies associated with having an ATM
3 network prescribe the default interchange fee, via rules specifying the amounts to be paid by and
4 to participants in network ATM transactions.

5 2. The ability of an ATM network to set interchange fees, as well as a host of other
6 network rules, at the network level, is central to the functioning of the network. If the owner of
7 an ATM does not know the terms of reimbursement for a cash withdrawal made by another
8 bank's depositor, it will be unwilling to dispense cash to that consumer. If any ATM network
9 were not permitted to set rules and fees at the network level, members would need to enter into
10 bilateral negotiations with each other. To create and maintain a network the size of Star,
11 members would each need to engage in and successfully conclude thousands of bilateral
12 negotiations. It is highly unlikely that such an extraordinarily cumbersome process would be
13 successful. Even if an ATM network of some size could be created, it would be much less
14 efficient than a network with centrally set rules and fees. Thus any ATM network based on
15 bilateral negotiations, would not likely be competitively viable against proprietary networks
16 where the operator sets the interchange fees in accord with long-standing industry practice.

17 3. I have also been asked to consider the efficiencies associated with the ability of an
18 ATM network to decide on a non-zero interchange fee at the network level, as compared to a
19 network that was constrained to set a zero interchange fee. I find that the ability of an ATM
20 network to set the desired level of interchange fees, both as a general matter and in competition
21 with other ATM networks, is important to the ability of an ATM network to attract ATM card
22 issuers and ATM owners.

23 4. Before turning to a more detailed discussion of the conclusions described in
24 paragraphs 2 and 3, I believe it is important to point out the striking and important empirical fact,
25 that all ATM networks in the United States for which data are available have had positive
26 interchange fees at all times through to the present. The fact that all of these networks, in
27 different regions, operating with different ownership structures, and in competition with other
28

1 networks, have all chosen positive interchange fees at all points in time, is strongly indicative of
 2 the efficiency of having a network-wide positive interchange fee.

3 5. My declaration is organized as follows. Section II describes my background and
 4 qualifications. Section III presents a brief overview of the relevant aspects of the ATM industry.
 5 And Section IV explains the role of, and efficiencies associated with, centrally set interchange
 6 fees in an ATM network.

7 6. I understand that the discovery process is currently ongoing in this case. I will
 8 review additional relevant information as it becomes available.

9 **II. QUALIFICATIONS**

10 7. My name is Richard Schmalensee. I am the Howard W. Johnson Professor of
 11 Economics and Management at the Massachusetts Institute of Technology (MIT). I have taught
 12 at MIT since 1977, except for 1989-1991 when I was a member of the President's Council of
 13 Economic Advisers. I served as Dean of the Sloan School of Management at MIT from 1998
 14 until I stepped down at the end of June 2007. I have served as a Director of the Long Island
 15 Lighting Company, the International Securities Exchange, MFS Investment Management, and
 16 the International Data Group, and have been a member of the Executive Committee of the
 17 American Economic Association.

18 8. As an academic, I have specialized in using economics to understand the
 19 operation of firms and industries, a field known in the profession as industrial organization. I
 20 was the co-editor of Volumes I and II of the *Handbook of Industrial Organization*, a standard
 21 reference in the field, and I wrote the entry on Industrial Organization in *The New Palgrave*, an
 22 authoritative encyclopedia of economics. During my career I have been author or co-author of 11
 23 books and more than 110 articles on industrial organization and other areas of economics. Many
 24 of these apply research in industrial organization to issues in antitrust. I am a Fellow of the
 25 Econometric Society and the American Academy of Arts and Sciences. Over the years, both the
 26 U.S. Federal Trade Commission and the U.S. Department of Justice have asked me to consult on
 27 antitrust issues. For example, I was one of two economists outside the government with whom
 28 Department of Justice consulted in preparing the 1992 *Horizontal Merger Guidelines*.

1 9. I have had a special interest in the economics of credit, debit, and ATM cards. I
 2 am the co-author of both editions of *Paying with Plastic: The Digital Revolution in Paying and*
 3 *Borrowing*. I have also written about the economics of payment card interchange fees¹ and the
 4 antitrust treatment of joint ventures.² I have served as an economic expert witness on a number
 5 of credit, debit, and ATM card matters, including the *SouthTrust* case, which concerned network
 6 rules prohibiting ATM surcharges.³ My curriculum vita is attached as **Appendix A**. My hourly
 7 rate is \$800. The opinions I express in this report are to a large degree based on my many years
 8 of study of bank network economics. In addition, I have conducted a series of interviews with
 9 industry executives from the bank defendants, from the Star network, and from PNC and
 10 Cardtronics,⁴ as well as with Dennis Lynch, who I understand is acting as an industry consultant
 11 and expert for the defendants in this case. I have also reviewed Mr. Lynch's declaration. A list of
 12 the individuals whom I interviewed is attached as **Appendix B**. A list of the documents upon
 13 which I relied is attached as **Appendix C**.

14 **III. OVERVIEW OF THE ATM INDUSTRY**

15 **A. Banks and Cardholders**

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18 ¹ Schmalensee, Richard, "Payment Systems and Interchange Fees," *Journal of Industrial*
 19 *Economics*, Vol. 50, Issue 103, 2002, p. 105. See also, Evans, David S. and Richard
 20 Schmalensee, "The Economics of Interchange Fees," Proceedings – Payments System
 Research Conferences, Federal Reserve Bank of Kansas City, 2005, p. 73-120.

21 ² Evans, David S. and Richard Schmalensee, "Economic Aspects of Payment Card Systems
 22 and Antitrust Policy Towards Joint Ventures," *Antitrust Law Journal*, Vol. 63, 1995, p. 861;
 23 Chang, Howard H., David S. Evans, and Richard Schmalensee, "Some Economic Principles
 24 for Guiding Antitrust Policy Towards Joint Ventures," *Columbia Business Law Review*, Vol.
 25 1998, p. 223; Evans, David S. and Richard Schmalensee, "Joint Venture Membership: Visa
 26 and Discover Card," in *The Antitrust Revolution*, John E. Kwoka and Lawrence J. White
 (eds.), (New York: Oxford University Press, 1999).

27 ³ *U.S. v. Visa U.S.A., Inc., et al.*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001); *In Re: Visa*
 28 *Check/MasterMoney Antitrust Litigation*, U.S. District Court for the Eastern District of New
 York (CV-96-5238); *Advanta Corp. v. Visa U.S.A., Inc.*, U.S. District Court for the Eastern
 District of Pennsylvania (96-CV-7940); *Southtrust Corporation v. Plus System, Inc., Network,*
Inc., and Southeast Switch, Inc., U.S. District Court for the Northern District of Alabama,
 Southern Division (CV-93-P-2291-S); *SCFC ILC, Inc. (MountainWest) v. Visa U.S.A., Inc.*,
 819 F. Supp. 956 (D. Utah, 1993), *rev'd in part and aff'd in part*, 36 F.3d 958, 968-69 (10th
 Cir. 1994).

29 ⁴ Cardtronics is a large independent sales organization or ISO; see paragraph 13, below.

1 10. Banks offer a range of services to attract depository customers. For example, a
 2 checking account will commonly allow the consumer access to teller services at bank branches,
 3 check writing on her account, automated teller machine (ATM) services, debit card services, as
 4 well as a range of other services and functionality. Many of these services are typically bundled
 5 into the overall price that the consumer pays for the account. For example, the bank may not
 6 charge for each check that the consumer writes on her account or deposits into her account. The
 7 bank's fee for the overall account comes implicitly in the form of the difference between the
 8 return it expects on funds deposited in the account versus the interest (if any) it offers on the
 9 account, as well as sometimes in the form of an explicit monthly fee for maintaining the account.

10 11. ATM services are one component of the bundle of services offered to depository
 11 customers. ATM access typically allows a consumer to withdraw cash from her account, as well
 12 as perform balance inquiries or transfers, at any ATM that is in a network in which her bank
 13 participates.⁵ (She can generally also make deposits at her bank's own ATMs as well as any
 14 others that have agreed with her bank to provide deposit services.) This allows her access to her
 15 account even when she is not close to a branch of her bank and at times when her bank is not
 16 open. For transactions at her bank's own ATMs, she will typically not be charged any fees. For
 17 transactions at another bank's ATMs, she will often, but not always, incur a surcharge set by the
 18 ATM owner; she also may incur a "foreign fee" from her bank for using a foreign ATM, but the
 19 use and amount of these fees appear to vary substantially among card-issuing banks.

20 12. The decision for a bank to join an ATM network is complicated.⁶ The bank has to
 21 pay interchange fees and switch fees for its customers' foreign transactions but receives

22
 23 ⁵ In my declaration, for convenience my main focus is on cash withdrawal transactions, rather
 24 than the other types of ATM transactions (deposits, balance inquiries, and balance transfers
 25 between accounts). The discussion concerning the efficiencies associated with interchange
 26 fees below applies generally to these other types of transactions.

27 ⁶ Most ATM networks are also point-of-sale debit networks. The combined ATM and debit
 28 network is also known as an electronic funds transfer (EFT) network. When ATM cards are
 29 also enabled for use at the point-of-sale, the same physical card also functions as a debit card.
 30 That is, a consumer can use her Star card to make retail purchases at stores that have chosen
 31 to accept Star debit cards and have installed the PIN-pads needed to process the transactions.
 32 The same card can also offer signature debit functionality via the MasterCard or Visa debit
 33 networks. For the purposes of my declaration, I have focused only on the ATM aspects of
 34 EFT networks.

1 interchange fees and, if it chooses to set them, surcharges on foreign transactions at its own
 2 ATMs.⁷ The bank must also pay membership fees to belong to the network. The bank will also
 3 consider the impact of joining the ATM network on its ability to compete for depository
 4 customers with other banks. Joining the network allows the bank to offer its customers access to
 5 a wider network of ATMs beyond its own. At the same time, the bank must agree to make its
 6 ATMs available to customers of other banks, thereby allowing those banks to offer customers
 7 more attractive ATM services. A bank that has invested in an extensive ATM fleet of its own is
 8 unlikely to be willing to offer the benefit of access to those ATMs absent adequate compensation
 9 for the competitive advantage provided to its competitors in attracting depository customers.

10 13. One important category of ATM owners consists of independent sales
 11 organizations, or “ISOs,” which own and operate ATMs but do not offer banking services.⁸ ISOs
 12 primarily focus on profits from ATMs, which come almost entirely from surcharges and
 13 interchange fees.⁹ Unlike financial institutions, ISOs do not have depository banking operations
 14 that are affected by participation in an ATM network. The decision of ISOs to participate in an
 15

16 7 In some networks, including Star’s, ATM owners also pay a surcharge fee to the network if
 17 they have imposed a surcharge on the cardholder. Star refers to the fee that is charged to the
 18 consumer as the “convenience fee”: this is also commonly referred in the industry as a
 19 “surcharge,” which is the terminology I have used. Star refers to the fee that is charged to an
 20 ATM owner that surcharges as the “surcharge fee.”

21 8 ISOs are not members of Star but are sponsored into the network by a member institution.
 22 This arrangement is common in other ATM networks. For example, both NYCE and
 23 Accel/Exchange have similar policies for ISOs. See
<http://www.accelexchange.com/isoProcessors.aspx> and
<http://www.nyce.net/atmdeployers/index.jsp>. Many ISO-deployed ATMs are owned (or
 24 partially owned) by retailers, in which case the retailer keeps the majority of the income
 25 generated by the ATM, while some are fully owned by the ISO. This mix has changed over
 26 time, from 55 percent retailer-owned versus 45 percent ISO-owned in 2001, to 87 percent
 27 retailer-owned versus 13 percent ISO-owned in 2005. See, “2002 ATM Deployer Study,”
 Dove Consulting, February, 2002, at 33; see also, “2006 ATM Deployer Study,” Dove
 Consulting, September, 2006, at 41-42. Because ISOs share some of the ATM revenue even
 28 for ATMs categorized as retailer-owned, and for convenience, I use the term ISO to cover
 both types of ownership structures. See, “2002 ATM Deployer Study,” Dove Consulting,
 September, 2006, at 32-33. The important distinguishing feature from bank-owned ATMs is
 that neither retailers nor ISOs have depository customers with ATM cards and therefore do
 not pay interchange fees.

9 For ISO-deployed ATMs where a retailer receives some or all of the revenues from ATM
 28 transactions, the retailer may also consider the benefit of having ATMs that attract foot
 traffic to the stores in which they are located.

1 ATM network is therefore particularly sensitive to expected surcharge revenue and interchange
 2 fees.

3 **B. ATM Networks**

4 14. The central function of an ATM network is to facilitate ATM transactions
 5 between cardholders and ATM owners who do not otherwise have a contractual relationship. We
 6 refer to such a transaction as a foreign ATM transaction. ATM networks are comprised of
 7 "issuers" (banks with cardholders) and ATM owners. If an issuer and an ATM owner belong to
 8 the same network a consumer with a card from that issuer will be able to use her card in any
 9 ATM belonging to that owner. Most ATM owners are depository banks, so they are also ATM
 10 issuers, but a significant number are ISOs. ATM networks compete against each other for
 11 network members. To be successful, an ATM network must compete against other ATM
 12 networks to attract ATM card issuers and ATM owners to its platform.

13 15. ATM networks provide detailed sets of rules that spell out the rights and
 14 responsibilities of each party. For example, the network specifies data transmission standards,
 15 ATM functionality standards and transaction types (such as cash withdrawals, balance inquiries,
 16 and balance transfers), ATM availability requirements (generally 24 hours a day), ATM card
 17 standards, and routing rules for transactions.¹⁰ The network also defines the terms of settlement
 18 of transactions among participants. For example, on a withdrawal by Bank A's customer from
 19 Bank B's ATM of \$100 with an associated \$1 surcharge, the rules specify what Bank A must pay
 20 Bank B and when it must make the payment, as well as what fees are owed to the network. The
 21 network also sets other fees, such as a membership fee for belonging to the network. The
 22 network also allocates the risk associated with transactions, such as what happens in the case of
 23 fraud or when a cardholder disputes a transaction.

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28 ¹⁰ "STAR Network Operating Rules," STAR Systems, Version 1.0, October 2001, at
 STAR00027493-STAR00027511.

16. The Star ATM network was started by a group of smaller financial institutions in
1 California and other parts of the Western United States in 1984.¹¹ The creation of Star allowed
2 these smaller financial institutions to offer their respective depository customers access to a
3 much broader network of ATMs than any of them could offer individually. The network initially
4 set cash withdrawal interchange fees at 60 cents for off-premise and 40 cents for on-premise to
5 “provide an equitable method for ATM/electronic terminal owners” and “to encourage
6 entrepreneurial placement of conveniently located ATM’s.”¹²

8 17. At around the same time, a number of other ATM networks were also forming.
9 These included Pulse in the South around Texas in 1981, Yankee 24 in New England in 1983,
10 Money Station in the Midwest around Ohio in 1983, NYCE in the Northeast around New York
11 in 1984, Most in the Southeast around Virginia in 1984, and Cash Station in the Midwest around
12 Illinois in 1986.¹³ Some other ATM networks had already formed in the mid to late 1970s,
13 including Jeanie in the Midwest around Ohio in 1977, Xpress24 in New England in 1978, Magic
14 Line in the Midwest around Michigan in 1979, MAC in the Mid-Atlantic around Pennsylvania in
15 1979, and MPACT in the South around Texas in 1979.¹⁴

16 18. Most ATM networks, including Star, were started by multiple bank members. A
17 minority, such as Xpress24 owned by BayBanks in New England or Cashstream owned by
18 Mellon in Pennsylvania, were owned by a single bank.¹⁵ Of the top 20 regional ATM networks
19 in 1985, 13 were owned by a joint venture of banks, 6 by a single bank, and 1 by a non-bank.¹⁶
20 At the time, some larger banks decided not to join a regional ATM network. For example,

²³ 11 Murphy, Patricia A., "The Man in the EFT Hot Seat," Financial Services Online, October 31, 1998; "1989 EFT Network Data Book," Bank Network News, Vol. 7, No. 13, November 1988, at 6.

²⁴ ¹² "Prospectus," Star Systems, 1984, at 7 and 12.

¹³ “1989 EFT Network Data Book,” *supra* note 11, at 6-11.

26 | ¹⁴ *Id.* at 6-13

²⁷ ¹⁵ *Id.* at 10; See also, Newman, Joseph, "Institutions, Firms Test MAC System to Dispense Cash," American Banker Section 3, January 9, 1985.

²⁸ ¹⁶ Hayashi, Fumiko, Richard Sullivan and Stuart Weiner, "A Guide to the ATM and Debit Card Industry," Federal Reserve Bank of Kansas City, 2003, at 27.

1 Citibank initially relied on its own ATM base.¹⁷ Plus and Cirrus, the two “national” ATM
 2 networks, also developed during the 1980s. Visa took an ownership position in Plus in 1982 and
 3 began to build it out as a national ATM network.¹⁸ MasterCard acquired Cirrus in 1988 and also
 4 developed it as a national ATM network.¹⁹ Banks typically used Plus and Cirrus as ATM
 5 networks of “last resort” to provide ATM access to their cardholders for ATMs not covered by
 6 the regional networks, including for international ATM transactions.

7 19. The next major development in ATM networks followed the widespread
 8 elimination of no-surcharge rules in 1996.²⁰ ISOs became an increasingly important factor in
 9 ATM networks. There were also significant changes among ATM networks in the late 1990s and
 10 early 2000s. Networks began to consolidate through mergers and acquisitions. The Cash Station,
 11 MAC, and Honor networks became part of Star; the Yankee24, EFTI and Magic Line networks
 12 became part of NYCE; and the Money Station and Tyme networks became part of Pulse. The
 13 ownership structure of ATM networks also changed, with proprietary non-bank ownership
 14 becoming the norm.²¹ From 1996 to 2006, the number of bank joint ventures among the top 20
 15 regional ATM networks went from 14 to 6, the number of single bank networks went from 3 to
 16 8, and the number of non-bank networks from 3 to 6 (including the top three, Star, NYCE and
 17 Pulse).²²

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 19 ¹⁷ Brown, Merrill, “Citicorp Taking Lead in High-Tech Finance,” The Washington Post, March
 25, 1984.

20 ¹⁸ Hayashi et al. *supra* note 16, at 13. Visa acquired full ownership of Plus in 1993. “Company
 21 News; Visa to Acquire A Card System,” The New York Times, November, 3, 1993.

¹⁹ Hayashi et al. *supra* note 16, at 13.

²⁰ *Id.*

21 Since the acquisition of Star by Concord EFS in February 2001, Star has functioned as a
 22 proprietary network. I understand that there is a disagreement between the parties in this
 23 litigation as to whether the interchange fees set by Star after it became a proprietary network
 24 still constituted price fixing by the bank defendants. Almost all of the observations and
 25 opinions set forth in this declaration regarding the potential procompetitive efficiencies of
 26 allowing transfer payments between issuers and deployers apply to both joint ventures and
 27 proprietary networks.

²² See, Hayashi, Fumiko, Richard Sullivan and Stuart Weiner, “A Guide to the ATM and Debit
 23 Card Industry: 2006 Update,” Federal Reserve Bank of Kansas City, 2006, at 30. This
 24 comparison on ownership structure by the Kansas City Federal Reserve focused only on what
 25 it characterized as “regional” ATM networks, which included networks such as Star and
 26 NYCE, which had started as regional networks but are now national in scope, and did not

1 20. As I noted above, all ATM networks in the United States at all times through to
 2 the present, for which industry data are available, have had positive interchange fees.²³ The fact
 3 that all of these networks, in different regions, operating with different ownership structures, and
 4 in competition with other networks, have all chosen positive interchange fees at all points in
 5 time, is strongly indicative of the efficiency of having a network-wide positive interchange fee.²⁴
 6 In particular, the use of positive interchange fees by many different proprietary networks implies
 7 that such fees must generally enhance network value, since that is the logical objective of a
 8 network owner. Since the network simply passes interchange fees from card issuers to ATM
 9 owners, interchange must enhance network value by increasing network membership and the
 10 volume of transactions processed by the network, since these are the primary sources of network
 11 revenue. By thus increasing output, these fees are pro-competitive.

12 **IV. Role of Default Network-Wide Interchange Fees in ATM Networks**

13 **A. Need for Contractual Certainty Between ATM Owner and Card Issuer**

14 21. As ATMs and ATM networks have become an integral part of our lives, it is easy
 15 to forget how remarkable a foreign ATM transaction really is. A consumer from Bank A can go
 16 to Bank B's ATM and withdraw cash from that ATM even though she has no relationship of any
 17 kind with Bank B. She can do this when she is far away from any of her bank's branches or
 18 ATMs, including when she is traveling in other countries, and withdrawing a different currency

19 20. include the national PLUS and CIRRUS networks owned by Visa and MasterCard
 21 respectively.

22 ²³ This includes the following publications with information on the ATM industry: "EFT
 23 Network Data Book," Bank Network News, 1989-2007; Debit Card Directory, 1995-2000;
 24 The Nilson Report, 1970-2007; Federal Reserve Bank of Kansas City, Payment Card Studies:
 25 Hayashi et al. *supra* note 16, and Weiner, Stuart and Julian Wright, "Interchange Fees in
 26 Various Countries: Developments and Determinants," Prepared for Federal Reserve Bank of
 27 Kansas City International Payments Conference, Santa Fe, New Mexico, May 4-6, 2005.
 28 Available data include interchange fees for eight ATM networks in 1983 (MAC, Pulse,
 29 Exchange, Magic Line, Cash Station, BankMate, Shazam, and Tyme) as reported in a
 30 historical table in the 1995 Debit Card Directory. All of these networks had positive
 31 interchange fees in 1983, as did all others networks for which data were available from 1983-
 32 1993.

33 ²⁴ The one network that I am aware of in the United States that did not set interchange fees at
 34 the network level was the NETS network in Nebraska. As I discuss further below, for a time
 35 NETS allowed each ATM owner to set its own interchange fee, which resulted generally in
 36 positive interchange fees that appeared to have been higher than those set by other networks,
 37 which eventually led to the establishment of a network-wide interchange fee.

1 from that on deposit with her bank. The reason the transaction can happen is that, while she has
 2 no relationship with Bank B, and Bank A (her bank) may also have no direct relationship with
 3 Bank B, Banks A and B have a detailed agreement specifying all the relevant terms associated
 4 with transactions by virtue of belonging to the same ATM network.

5 22. As a matter of basic economic and business principles, it is clear that an ATM
 6 owner will not willingly dispense cash to a consumer with whom it has no contractual
 7 relationship if it has no assurance that it will be reimbursed or does not know the terms of such
 8 reimbursement (e.g., amount, time, manner and risk allocation). In short, the ATM owner needs
 9 to know how much it will pay out and how much it will receive, as well as a host of other
 10 contractual details. Indeed, even the surcharge an ATM owner may charge the cardholder is not
 11 recovered directly from the cardholder, but rather via her depository (issuing) bank. In order for
 12 a foreign ATM transaction to occur, therefore, there must be certainty regarding the applicable
 13 terms of the transaction between the ATM card issuer and the ATM owner: what will the issuer
 14 pay the ATM owner for facilitating the transaction (or vice versa); when and how will the ATM
 15 owner be reimbursed for the cash dispensed to the cardholder; which party controls the routing
 16 of the transaction (the issuer, the ATM owner, or the network); which party bears the risk of
 17 fraud; the allocation of costs incurred by each party; and a number of other details. The
 18 difference between what the ATM owner receives and what it pays out must be known for a
 19 transaction to occur. That difference has been labeled the interchange fee in U.S. ATM
 20 networks.²⁵

21 23. The existence of some advance understanding on the interchange fee is therefore
 22 absolutely essential for foreign ATM transactions to occur. Without an agreement on that term of
 23 the overall transaction, as well as the other relevant terms associated with a foreign ATM
 24 transaction, ATM owners would not rationally be willing to dispense cash to consumers with
 25

26 25 More precisely, the interchange fee is equal to the difference between the funds received by
 27 the ATM owner and the sum of the cash it has paid out plus the surcharge the consumer has
 28 instructed her bank to pay on her behalf. (The ATM owner may also pay fees to the
 network.) Thus if the ATM owner knows what it will receive in a given transaction, it
 necessarily knows the relevant interchange fee – even if in some other institutional setting it
 is called something else.

1 whom they do not have a relationship. One theoretical possibility, of course, is that a network's
 2 rule would provide that the ATM owner would be reimbursed only "at par," meaning that the
 3 interchange fee would be zero.²⁶ With a zero fee, the ATM owner at least knows that for a \$100
 4 foreign ATM transaction, it will receive \$100 from the cardholder's bank and that it will neither
 5 receive nor pay anything further with respect to this transaction.²⁷ Faced with an ATM network
 6 with a zero (par) interchange fee, for example, an ATM owner can make an informed decision
 7 about its expected net benefit from joining the network or deploying ATMs. As I explain
 8 Section IV.B., below, while a specified zero interchange fee (like any other specified level of the
 9 fee) would deal with the issue of "certainty", there not only is no a priori reason to favor zero
 10 over other interchange fees, there are some very strong reasons that suggest it is not likely to be
 11 the most sensible amount. My point for the moment, however, is simply that in the absence of
 12 *some* specified price term that both the issuer and the ATM owner know (and can rely on) in
 13 dealing with one another as part of a network, there would be no contractual basis for their
 14 necessary cooperation to create a foreign ATM network transaction. Such specified terms are
 15 absolutely essential for any ATM network to operate.

16 **1. Alternatives to Network-Wide Interchange Fees Are Infeasible**

17 24. If collective setting of interchange fees constitutes impermissible price fixing, as I
 18 understand the plaintiffs in this case to be arguing, the only alternative for a joint venture ATM
 19 network is to avoid setting an interchange fee collectively at all. That is, taking the \$100 foreign
 20 transaction example from above, the system could not even state that the issuer is obligated to
 21 pay at least the ATM owner the \$100 that the ATM has dispensed to the issuer's customer, since
 22 that would be equivalent to setting a collective default interchange fee of zero since it
 23 establishes, on a network-wide basis the amount that members are to pay and receive in any
 24 ATM transaction over the relevant network.

25
 26 _____
 27 ²⁶ My understanding is that Judge Walker has held, in effect, that if the collective setting of the
 28 interchange fee is anticompetitive price fixing (as argued by plaintiffs) then collective setting
 of a price of zero would still be price-fixing.

²⁷ For ease of exposition, I assume in this example that there are no surcharges on the
 transaction and ignore other network fees associated with the transaction.

1 25. My understanding is that plaintiffs have argued that interchange fees should be
 2 “market-determined” in joint venture ATM networks rather than collectively set. I further
 3 understand that plaintiffs have not spelled out exactly what they mean by “market-determined”
 4 interchange fees. One alternative to a collective decision on interchange suggested by plaintiffs’
 5 complaint is to have bilateral agreements on the interchange fee between each possible
 6 combination of issuer and ATM owner in the network.²⁸ In what follows I show that such an
 7 approach would simply not work, particularly for a network the size of Star.

8 **a. Other Network Rules and Fees Must Be Set at the Network
 9 Level**

10 26. In my discussion of bilateral interchange fee setting below, I make the
 11 simplifying assumption that the network can still set rules, as it does now, on everything except
 12 for the level of interchange fees. As discussed above, the interchange fee is only one of a large
 13 number of detailed terms of the agreement between card issuer and ATM owner that must be
 14 agreed upon in advance of a foreign ATM transaction. The card issuer and ATM owner must
 15 have certainty not only with respect to the interchange fee but also with respect to all of the other
 16 relevant terms concerning payment and operational details (such as response time and routing).
 17 In joint venture ATM networks, members each agree to network rules that specify all of the
 18 conditions for membership generally and, specifically, all of the relevant terms for a foreign
 19 ATM transaction. For example, banks pay annual membership fees and ISOs pay annual
 20 participation fees to the network.²⁹ For each ATM transaction, issuers pay a switch fee and ATM
 21 owners (in some networks, including Star’s) pay a surcharge fee if they have imposed a
 22 surcharge.³⁰ Network rules also allocate risk between parties—in general, the issuer bears the
 23 risk of fraud for properly authorized transactions.³¹

24
 25 ²⁸ First Amended Complaint for Damages and Equitable Relief, Brennan v. Concord EFS, Inc.,
 Case No. C04-2676, U.S. Dist. (N.D. Cal., 2005), ¶ 75.

26 ²⁹ “Exhibit A: Fee Schedule,” Star Systems, April 30, 2001, at STAR00065095.

27 ³⁰ *Id.* at STAR00065098. Again, the surcharge fee is different from the surcharge. In some
 ATM networks, including Star’s, ATM owners also pay a surcharge fee to the network if
 they have imposed a surcharge on the cardholder. See, *supra* note 7.

28 ³¹ “Star Network Operating Rules,” *supra* note 10, at STAR00027495-STAR0007496.

1 27. All of these network rules and fees have direct and indirect financial
2 consequences for members. The network could change its rules and fees or create new ones. For
3 example, it could require ATM owners rather than issuers to be liable for fraud, or it could
4 decide to subsidize ATM installation or maintenance costs on a per-machine basis and finance
5 these subsidies by various fees imposed on issuers. Such changes would affect the incentives for
6 participation in the network. From an economic perspective, the ability of the network to use
7 rules and other fees to affect the incentives of issuers and ATM owners to participate in the
8 network bears a close relation to the ability to set interchange fees to affect those incentives.³² It
9 is thus unclear to me from an economic perspective why if the collective setting of interchange
10 fees is believed to be anticompetitive, other network rules and fees could be permitted to be
11 determined on a collective basis. But, it is much more difficult to even conceive of a scenario
12 under which all network rules and fees could feasibly be determined by bilateral negotiations
13 rather than at the network level. Nevertheless, as indicated above, and purely for the sake of
14 simplicity, for the remainder of this discussion, I set this issue aside and consider bilateral setting
15 of interchange fees only, assuming that all other network fees and rules are centrally set.

b. **Bilateral Negotiations Are at Least Highly Inefficient, And Likely Infeasible for an ATM Network of the Size and Breadth of Star's**

19 28. In my opinion, one of the most powerful arguments for why a network-
20 established interchange fee is efficiency-enhancing for a network like Star is that the alternative,
21 bilateral negotiations, is at best inefficient and likely unworkable.

22 29. There are a number of reasons why it is unlikely to be feasible to use bilateral
23 agreements on interchange fees to create or maintain a network with as many diverse members
24 as Star. First, there are very substantial transactions costs with the bilateral negotiations needed
25 for each agreement between each issuer and each acquirer. In the Star network with 5,400

27 ³² I am not assuming that collective setting of other network rules and fees are a ready
28 substitute for setting interchange fees. Indeed, trying to use other network rules and fees to
attempt to achieve some of the balancing function performed by interchange fees is likely
much less efficient.

1 members, bilateral negotiations would require over 14.6 million individual negotiations. It is
 2 likely that in most of these cases the members do not otherwise have any commercial
 3 relationship beyond belonging to the same ATM network, especially in a network as broad as
 4 Star's. The transaction costs associated with bilateral agreements alone makes this alternative
 5 substantially less efficient than having a network-wide default fee. While large institutions might
 6 find it worthwhile to incur the costs of trying to negotiate acceptable agreements with each other,
 7 it is hard to imagine that they would be willing to spend the time necessary to reach agreements
 8 with the many smaller institutions that would bring few ATMs or few retail customers to the
 9 table.

10 30. In a regime of bilateral negotiations, it is likely that some potential members
 11 would not reach agreements with some others, because they are unwilling even to invest the time
 12 necessary to negotiate, because they have decided not to negotiate for strategic reasons, or
 13 because negotiations have broken down, then their cardholders cannot make foreign ATM
 14 transactions at each other's ATMs. In a network as broad as Star's, there are many differently
 15 situated network members with divergent incentives. It is likely that in many cases, members
 16 would fail to reach agreement. As I discuss in the next several paragraphs, I do not believe there
 17 is a satisfactory way to handle this situation.

18 31. For example, suppose Bank A and Bank B are local competitors for depository
 19 accounts and that Bank A has invested in building a large fleet of ATMs, while Bank B has none.
 20 If Bank A provides access to its ATMs to Bank B's customers on the same terms as it provides
 21 access to its own customers, that will help Bank B compete more effectively with Bank A for
 22 depository customers. Clearly Bank A will be reluctant to share its ATMs with Bank B and will
 23 be unlikely to do so unless it is adequately compensated (perhaps by a large interchange fee) for
 24 this diminution of its competitive advantage. Under bilateral negotiations, Bank A and Bank B
 25 may be unable to find an interchange fee that is agreeable to both. That is particularly likely if
 26 Bank A, by refusing to reach agreement with Bank B, can prevent its competitor (B) from being
 27 able to offer to its depositors (and prospective depositors) the benefits of being a member of a
 28 large ATM network. Such a decision, made by A based on its individual competitive interests

1 vis-à-vis Bank B, would, however, deprive all other network members, and their depository
 2 customers, of the benefits of having B as a network member. The potential for this scenario to be
 3 repeated many times over, with equivalent effect, could be substantial,

4 32. By contrast, when the network sets interchange fees for all transactions in the
 5 network and requires universal acceptance, Bank A makes an all or nothing decision to join the
 6 network. Bank A will still be concerned about the cost of allowing Bank B access to its ATMs,
 7 but Bank A must either decide to share its ATMs with all members of the network and gain
 8 access to all those members' ATMs or not to join at all. It cannot pick and choose among
 9 potential partners.³³

10 33. I have thus far shown that in a large network, like Star, in which interchange can
 11 only be set by bilateral negotiation, there are likely to be many members – or, better, candidate
 12 members – who fail to reach agreement. At some very abstract level one might imagine
 13 admitting all candidates and giving up universal acceptance. That is, an issuer would have to tell
 14 its customers that their cards would work in some but not all of the ATMs in the “network”. But
 15 in the real world such a “network” would be fatally flawed. The promise of universal acceptance
 16 to consumers, achieved by imposing the requirement of universal acceptance on members, is
 17 fundamental to ATM networks.³⁴ Indeed, the central purpose of an ATM network is to enable

18
 19 ³³ This is an illustrative example. It is clear from Star's analyses of the impact of changes in the
 20 interchange fee on members that there are significant divergences between banks as net
 21 issuers versus net acquirers. “Star Systems Pricing Discussion,” Star Systems, Version 2,
 22 August 2002, at STAR00021496 and STAR00021497.

23 ³⁴ While the operating rules of other networks besides Star's are generally not public, available
 24 information such as ATM locator web sites are all indicative that universal acceptance
 25 applies to all US ATM networks. A review of the top ten U.S. ATM networks as of 2006 and
 26 the two global ATM networks (Plus and Cirrus) found that no information that indicated any
 27 deviation from a policy of universal acceptance. Of the ten of these that appear to offer an
 28 on-line ATM locator, none of them provided any indication that any card belonging to the
 29 network would not be usable at all ATMs in the network. (No locators could be found for
 30 Jeanie. The Networks (or NETS) network provided links to the Plus and Cirrus ATM
 31 locators.) Of the ten for which an online ATM locator was available, nine of them (Star,
 32 NYCE, Pulse, Accel/Exchange, Co-Op, Shazam, Transfund, Cirrus and Plus) offered some
 33 explicit reassurance to the consumer of universal acceptance. The remaining network
 34 (AFFN) provides an ATM locator that identifies network ATMs that the consumer can use
 35 and does not provide any indication that any of those ATMs would not be available to the
 36 consumer. For more information, see, <http://www.star.com/cardholders.aspx>;
<http://www.nyce.net/consumers/index.jsp>; <https://www.pulse-eft.com/public/group/consumer/consumerqa.html>;

1 cardholders in the network to use any ATM in the network. In a network that sets interchange
 2 fees and other rules at the network level, all members must agree on universal acceptance as a
 3 condition of membership. In a network based on bilateral negotiation, it may simply not be
 4 possible to have both a large network and universal acceptance.

5 34. To see why, suppose first that in order to assure universal acceptance, the network
 6 requires that all members have to reach agreements with all other members as a condition of
 7 participating in the network. But the network must thus also define what happens when all
 8 candidate members have not reached agreements with each other.

9 35. One possible rule is that any qualified institution can join the network but that the
 10 network simply will not operate unless all members have reached agreements with each other, so
 11 that universal acceptance is guaranteed. Such a "shut down" rule would create significant
 12 instability in the network, however, because any one candidate member would have the power of
 13 shutting down the entire ATM network by its failure to come to agreement with just one other
 14 candidate member. This would, for example, subject members who enjoyed major benefits from
 15 the network to hold up threats from other members who had little to gain (or lose) from
 16 participating in the network.

17 36. Another possible rule to ensure universal acceptance would determine
 18 participation sequentially (a "sequential" rule). For example, allow Banks A and B to participate
 19 if they have reached an agreement with each other; then allow Bank C to participate if it has
 20 reached agreements with both Banks A and B; and so on. Such a rule would place tremendous
 21 power in the hands of the first banks in the network, however, as any one of them would
 22 individually have the power to exclude any other bank simply by declining to reach an
 23 agreement with that bank. It is implausible that such a scheme would come anywhere close to
 24 replicating the widespread ATM network actually achieved by Star.

25 <http://www.accelexchange.com/atmLocator.aspx>; [http://www.co-
 opfs.org/public/locators/atmlocator/index.cfm](http://www.co-26 opfs.org/public/locators/atmlocator/index.cfm);
 27 http://www.shazam.net/cardholders_shazam_atms.html; <http://www.transfund.com/atm.asp>;
 28 http://www.mastercard.com/us/personal/en/cardholderservices/atmlocations/atm_faqs.html#6;
 <http://visa.via.infonow.net/locator/global/jsp/SearchPage.jsp>;
 [http://www.visadps.com/products/visa_check_card.html?it=visadps/products/visa_plus_atm
 _network.html](http://www.visadps.com/products/visa_check_card.html?it=visadps/products/visa_plus_atm_network.html)Visa % 20Check% 20Card; http://www.affn.org/atm_locator_foreign.php.

1 37. Yet another possible rule to ensure universal acceptance would be to let all
 2 members negotiate with each other and then attempt to identify the largest subset of banks that
 3 have reached agreements with all other banks in the subset (a “largest subset” rule). This
 4 scenario faces similar issues to the sequential rule. Once the largest subset of banks has been
 5 determined, any one bank in the group has the power to exclude any other bank outside of the
 6 group from participation.

7 38. Given the importance of universal acceptance and the difficulty of assuring it, a
 8 network with the same participation, scale and benefits as the Star network is unlikely to be
 9 viable if interchange must be set by bilateral negotiation.³⁵ Banks with large ATM fleets of their

10 ³⁵ The Australian domestic ATM and debit industry is sometimes said to have bilaterally set
 11 interchange fees. See, Weiner and Wright, *supra* note 23. In fact, the structure in Australia is
 12 more like the reciprocal agreements that were common between different U.S. ATM
 13 networks when they were more geographically distinct. In Australia, there were four major
 14 national banks that each developed its own ATM network, as well as the Cashcard and
 15 RediTeller networks used by smaller financial institutions. It is these individual bank
 16 networks and the two multi-bank networks that have reached bilateral agreements with each
 17 other. The CashCard and RediTeller networks each set network-wide interchange fees for
 18 ATM transactions within its respective network, not via bilateral negotiations. See, Credit
 19 Union Services Corporation, “CUSCAL Submission on Designation of ATMs,” July, 2004,
 20 at 2; see also, Cashcard Australia Limited, Submission to the Reserve Bank of Australia,
 21 “Designation of the ATM Payments System,” July 2004, at i. Cashcard includes more than
 22 50 financial institutions and RediTeller includes more than 150 credit unions. Because the
 23 Australian networks are not truly bilateral, there were fewer than 60 such agreements in
 24 Australia—it would appear that there are some additional agreements between some parties
 25 beyond those between the 4 major banks and the two networks, but far short of the over
 26 20,000 bilateral agreements that would be needed in a network with over 200 members. See,
 27 Reserve Bank of Australia and Australian Competition and Consumer Commission, “Debit
 28 and Credit Card Schemes in Australia: A Study of Interchange Fees and Access,” October,
 2000, at 33-34. The Reserve Bank of Australia (RBA), which has regulatory oversight over
 the ATM industry, formally announced in 2004 that it was considering increased regulation
 of the ATM industry to “promote efficiency and competition.” See, “Reform of Card
 Payment Systems,” Reserve Bank of Australia, Media Release No. 2004-06, June 11, 2004,
 available at http://www.rba.gov.au/MediaReleases/2004/mr_04_06.html. There have been
 discussions between the RBA and industry participants, starting before the formal
 announcement, regarding a variety of network rules, including access of financial institutions
 to ATM networks, interchange fees, and surcharges. The RBA declined to mandate a zero
 interchange fee for ATM transactions. It reserved the possibility of doing so for networks and
 participants that connected directly with each other—that is, requiring a zero interchange fee
 for transactions between the major banks and the ATM networks, but not within a network
 such as Cashcard and RediTeller. This was because it was concerned that bilateral
 negotiations over interchange fees could otherwise be “used in a way that adversely affects
 access or competition.” See, Lowe, Phillip, Reserve Bank of Australia, Financial System
 group, Letter to David Bell, Australian Bankers’ Association, May 31, 2007, available at
http://www.rba.gov.au/PaymentsSystem/Reforms/ATM/SubmissionsReformATMSystem/rba_310507_1.pdf; see also, “Payments System Board—November 2005,” Media Release No.
 2005-13, November 25, 2005, available at

1 own would likely prefer the option of withdrawing entirely from such an ATM network and
 2 perhaps form limited alliances with other banks with large ATM fleets, especially those in other
 3 geographic regions. As noted above, given the transaction costs associated with each set of
 4 negotiations, all else equal, it is likely that the larger banks would be less interested in even
 5 entering into negotiations with smaller banks (particularly those who were direct competitors),
 6 let alone reaching agreements with them.

7 39. It is even less plausible that a large joint venture network with bilateral
 8 negotiations over interchange fees could be viable once one considers the real-world fact that
 9 financial institutions have generally had the ability to join proprietary networks that can
 10 unilaterally impose a network-wide interchange fee. It is difficult to imagine that ATM networks
 11 run as joint ventures but required to operate with bilateral negotiations could survive given
 12 competition from proprietary ATM networks not subject to such restrictions. It makes no
 13 economic sense to create such a substantial bias against ATM networks operated as membership
 14 associations.³⁶

15 40. Other than bilateral negotiations, the only alternative means of reaching
 16 interchange fee agreements that are not determined by the network would be to give either ATM
 17 owners or the issuers the right to dictate the interchange fee on its transactions. That is, all
 18 members joining the network would be required to agree that, for example, each ATM owner
 19 would dictate the interchange fee on the transactions performed at its machines.

20

 21 http://www.rba.gov.au/MediaReleases/2005/mr_05_13.html. I am not aware of any other
 22 ATM networks that operate with bilaterally negotiated interchange fees. (I discuss the
 23 Nebraska network below, which operated for a while with acquirer-set interchange fees, but
 24 which did not involve bilateral negotiations.)

25 36 It is my understanding that plaintiffs may be taking the position that interchange fees set
 26 unilaterally by a proprietary ATM network are also anticompetitive. It is difficult to see how
 27 proprietary networks could operate at all under this theory. Consider, for example, a
 28 proprietary network sets its fees so that each ATM card issuer has to pay the network the
 amount of cash withdrawn plus any surcharge set by the ATM owner plus 60 cents and that
 each ATM owner receives from the network the amount of cash withdrawn plus any
 surcharge plus 50 cents. In setting these fees, it will have effectively instituted a network-
 wide interchange fee of 50 cents and a switch fee of 10 cents. The plaintiffs' position would
 therefore need to preclude a proprietary network from setting these fees. In any event, the
 efficiencies associated with interchange fees described in my report exist whether or not a
 proprietary network exists as a competitive alternative. The existence of the alternative of
 joining a proprietary network with an interchange emphasizes the inefficiencies that would
 result from prohibiting joint venture ATM networks from setting interchange fees.

1 41. Such a scheme would have significant problems when applied to an ATM
 2 network of the size and breadth of Star's. Each ATM owner would have an individual incentive
 3 to require as much payment as possible from issuers – particularly those who are direct
 4 competitors for depository customers. While the ATM owner would be concerned about whether
 5 ATM card issuers paid too much interchange fees to make it worth their while to join the
 6 network, the ATM owner would recognize that it would individually receive the full benefit of
 7 setting a higher interchange fee, while the cost in terms of lessened incentives for ATM card
 8 issuers to join would be borne by all ATM owners. (If it were possible to discriminate among
 9 issuers, ATM owners would be likely to set particularly high fees for direct competitors; forcing
 10 them to withdraw from the network and thus offer fewer ATMs to their customers might bring
 11 competitive advantages that would swamp the loss of interchange revenue.) That is, in economic
 12 terms there is an “externality,” where an individual ATM owner’s decision on its own
 13 interchange fee imposes costs on other parties. Externalities such as these lead to economic
 14 inefficiencies, as the ATM owner, in this case, will set an interchange fee that may be too high
 15 because it does not bear the costs imposed on other ATM owners from its decision. The one
 16 ATM network I am aware of that has tried such a scheme is a relatively small network, the
 17 Nebraska Electronic Transfer System (NETS). And, indeed, the interchange fees set by ATM
 18 owners in NETS appear to have been significantly above the interchange fees in other networks
 19 at the time.³⁷ To the extent that the alleged anticompetitive effects are that interchange fees have
 20 been too high under the network set fee in Star, it is unlikely that an acquirer set network would
 21 lower interchange fees.³⁸

22

23 ³⁷ The NETS president stated that in 1996 interchange on cash withdrawals averaged \$1.25 as
 24 compared to 30 to 60 cents in most networks. See, “State Of The States: ATMs Are
 25 Everywhere,” Bank Network News, Vol. 15, No. 3, June 26, 1996. Interchange fees
 26 continued to escalate to over \$2.00 by 1999 and as a result of pressure from Nebraska banks,
 27 the network moved to network set interchange fee of \$1.50. See “The ATM Revolution,”
 Northwestern Financial Review, Vol. 184, Issue 32, September 4, 1999. Besides the
 relatively small size of the network, the NETS network is also distinctive in having been set
 up following state legislation mandating ATM sharing among Nebraska banks (i.e., no bank
 could refuse access to its ATMs for cards of another Nebraska bank).

28 ³⁸ Similar arguments indicate that interchange fees might be significantly lower, perhaps
 negative, if issuers were given the right to set interchange fees. Such a network would have

1 42. In a world in which interchange fees in all ATM networks could only be set via
 2 bilateral negotiation, it is unlikely that any network would be able to maintain the number of
 3 members that Star has today. For the reasons discussed above, one would expect to see only
 4 networks involving relatively small numbers of institutions. Small institutions would be
 5 particularly disadvantaged: while they might build regional networks, it would be very difficult if
 6 not impossible for them to offer their customers the sort of national and international coverage
 7 they can offer today. Networks composed of a few large institutions might be able to offer their
 8 customers considerable geographic coverage, but with only a few member institutions they
 9 would be unable to match the ATM density of today's large networks. Today, almost any ATM
 10 card will work in almost any ATM in the United States and a large fraction of ATMs worldwide.
 11 In a world built on bilateral negotiations, that would not be close to being true.

12 **B. Network-Determined Default Interchange Fees Offer Efficiency Benefits**

13 43. As I have just discussed, there is an essential need for certainty of obligation in
 14 any payment network, since banks would not be willing to participate in such networks if the
 15 terms of their respective rights and obligations to other participants were not specified in
 16 advance. Thus, if ATM networks are not permitted to set a default interchange fee, they almost
 17 certainly will be unworkable. In my opinion, that is sufficient reason why centrally determined
 18 payment terms, including interchange, do not have the same economic effects as cartel price
 19 fixing, since they serve to allow large joint venture networks to be formed and to operate
 20 efficiently. In addition to considering that issue, I have also been asked by counsel to address a
 21 second issue: whether the ability to set interchange fees freely offers incremental efficiencies
 22 over a mandated interchange fee of zero. I consider this issue because I understand that plaintiffs
 23 may be alleging that the anticompetitive act in this case was a failure to set a zero interchange
 24 fee. I consider this under two scenarios—the existence of a no-surcharge rule and the absence of
 25 such a rule. I address that subject in this section of my declaration, even though economists
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28 significant inefficiencies as ATM owners would likely be unwilling to participate in such a
 network and would have inadequate incentives to install and maintain ATMs.

1 generally consider price regulation, which this would be, to be better done, if necessary, by
 2 expert regulatory agencies than by courts.

3 44. Before doing so, however, I want to reiterate the point noted above that all of the
 4 relevant terms of the agreement between card issuers and ATM owners must be agreed on in
 5 advance by network rules or contracts. Assuming the ATM network is permitted to freely set the
 6 terms other than the interchange fee, and if it felt that a zero interchange fee were too low to
 7 attract ATM owners, for the reasons mentioned below, the network would have a strong
 8 incentive to set the other terms of the contract in the favor of the ATM owners over the issuers.
 9 For example, it might make sense to increase membership fees generally and use the additional
 10 revenue to reimburse ATM owners directly for some of their costs of operating ATMs. I do not
 11 know if plaintiffs would allege that such payments would also constitute anticompetitive price
 12 fixing, but the point is that there are a whole host of terms that must be agreed upon, which in
 13 aggregate have significant effects on the relative costs and benefits on the two sides of the
 14 business. A network needs to have agreement on all those other terms to operate, but they can be
 15 structured to achieve much the same effects as a positive interchange fee. Even with a mandated
 16 zero interchange fee, we may end up with roughly the same relative costs as in a network that is
 17 free to set non-zero interchange fees. We would expect that changing rules to reallocate costs
 18 would be less efficient, however, since if the interchange fee were constrained, the network
 19 would have less flexibility in how it could balance costs and benefits, and reducing flexibility
 20 can only reduce efficiency.

21 **1. No Surcharges Permitted**

22 45. If an ATM network decides to impose a no-surcharge rule that prevents ATM
 23 owners from imposing surcharges, then the interchange fee is the only instrument available to
 24 affect the relative costs on the two sides. In particular, without the ability to surcharge, the
 25 interchange fee is the only significant source of revenue on foreign ATM transactions.³⁹ With an
 26 interchange fee that is mandated at zero, there would be essentially no revenue to an ATM owner

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 28 ³⁹ Currently, the only two significant sources of revenue for an ATM owner come from
 interchange fees and surcharges. See, "2006 ATM Deployer Study," *supra* note 8, at 22.

1 from a foreign ATM transaction. This would significantly lower the incentive to install and
2 maintain ATMs generally. This is especially true for ATMs owned by ISOs for which all
3 transactions are foreign. Without the ability to set a non-zero interchange fee, a joint venture
4 ATM network would likely be unable to provide adequate incentives to attract ATMs to the
5 network, particularly in competition with proprietary ATM networks not subject to such
6 restrictions.

7 **2. Surcharges Permitted**

8 46. Even when ATM owners are permitted to surcharge cardholders, the ability to set
9 and change the level of the interchange fee offers an ATM network an important competitive
10 instrument versus other ATM networks. Interchange fees play a significant role in allowing
11 ATM networks to balance the incentives of issuers and ATM owners to join, even when both
12 issuers and ATM owners can price directly to the cardholder in the form of, respectively, foreign
13 fees and surcharges. Again, the importance of a joint venture network being able to set a non-
14 zero interchange fee is highlighted when competition against proprietary ATM networks that can
15 offer positive interchange fees to ATM owners is considered.

16 47. The level of the interchange fee has significant effects on the actions of different
17 participants in ATM networks for a number of reasons. First, quite a few ATM cardholders are
18 not subject to foreign fees. For example, some depository customers have some or all of their
19 foreign fees waived depending on the account type and/or the balance maintained in the
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1 account.⁴⁰ In addition, some banks absorb surcharges for some of their customers as a
 2 competitive measure.⁴¹

3 48. Foreign ATM transactions are, after all, but one element of the bundle of services
 4 provided by the bank to its depository customers. Banks commonly offer a bundle of services
 5 without charging a direct fee for many or most types of transactions. For example, it is common
 6 for teller visits, online account access, check writing, notary services, and other services to be
 7 “free” in the sense that consumers do not pay a per use fee. Banks rarely if ever charge for use of
 8 their own ATMs, and, we noted above, sometimes they do not charge for use of foreign ATMs
 9 and even absorb surcharges for some of their customers. Given that these bundled pricing
 10 schemes have existed with significant competition among banks for depository customers, it is
 11 likely that this type of pricing offers benefits for consumers.

12 49. If some cardholders do not face a foreign fee for ATM transaction, an increase in
 13 the interchange fee can have significant effects on their behavior and on the output of ATM
 14 transactions. By making incremental foreign transactions more attractive to ATM owners, a
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17 40 For example, Citibank customers with a Citigold checking account are not subject to foreign
 18 ATM fees. For more details about the Citibank program, see https://web.us.citibank.com/cgi-bin/citifi/scripts/prod_and_service/prod_serv_detail.jsp?BS_Id=Packages&BV_UseBVCookie=yes. In addition to Citibank, Chase, Suntrust, Wachovia, and Wells Fargo also have
 19 account options that waive foreign fees. For more information about these programs, see
http://www.chase.com/ccp/index.jsp?pg_name=ccpmapp/platinum/home/page/benefits_overview;
https://www.suntrust.com/portal/server.pt?space=Opener&control=OpenObject&cached=true&parentname=CommunityPage&parentid=3&in_hi_ClassID=512&in_hi_userid=2&in_hi_ObjectID=441&in_hi_OpenerMode=2&;
http://www.wachovia.com/personal/page/0,,11_480_1427,00.html;
<https://www.wellsfargo.com/checking/>.

18 41 For example, Wells Fargo reimburses surcharges imposed by non-Wells Fargo ATM owners
 19 for account holders with a Portfolio Management Account (PMA) and balances of \$250,000
 20 or more. For more information, see <https://www.wellsfargo.com/checking/pma/>. In addition,
 21 PNC Bank provides automatic reimbursement of non-PNC Bank ATM Fees for checking
 22 account holders. For PNC'S free checking account customers, a minimum monthly balance
 23 of \$2,000 or more is required for ATM fee reimbursement. There is no minimum balance
 24 requirement for other checking account options. For more information on the PNC Bank
 25 features, see
<https://www.pnc.com/webapp/unsec/ProductsAndService.do?siteArea=/PNC/Home/Personal/Checking/Checking--+UPDATED>.

1 higher interchange fee will tend to reduce surcharges,⁴² thus making foreign ATM transactions
 2 cheaper overall for these cardholders and increasing output. With surcharges reduced, it
 3 becomes less costly for a card issuer to absorb surcharges faced by its cardholders. A mandated
 4 zero interchange fee, on the other hand, will tend to raise surcharges, since ATM owners would
 5 receive essentially no revenue from foreign ATM transactions.

6 50. Optional no-surcharge alliances among banks, such as the STARsf program, have
 7 also become increasingly prominent in recent years. In these alliances, each participating
 8 member generally agrees not to surcharge transactions at its ATMs made by cardholders of other
 9 alliance members.⁴³ In a mandated zero interchange fee world, such alliances may be much less
 10 viable. If one bank's ATMs are used more by another bank's cardholders than vice-versa, the
 11 absence of surcharges and interchange fee revenue precludes any means of remedying this
 12 imbalance. Banks that were otherwise interested in joining an alliance, but which expected their
 13 ATMs to be used disproportionately by others in the alliance, might not join. (I am assuming that
 14 the banks in the no-surcharge alliance are not permitted also to agree collectively on a non-zero
 15 interchange fee.)

16 51. Since, as discussed above, the level of ATM interchange fees may not be reflected
 17 directly in either foreign fees or surcharges for any number of reasons, the flexibility to set the
 18 level of the interchange fee offers an ATM network a significant competitive instrument to
 19 attract card issuers and ATM owners. This is especially important when we consider competition
 20 with proprietary ATM networks not subject to restrictions on interchange fee setting. If ATM
 21 owners did not impose differential surcharges depending on the interchange fee received, they
 22 would receive less compensation for a transaction on a zero interchange fee ATM network than

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 25 ⁴² Some banks have undertaken a strategy of not surcharging other banks' customers for foreign
 26 transactions, in part to try to compete for the depository accounts of those consumers.
 27 Increases in the interchange fee make such a strategy more attractive by increasing revenue
 28 from foreign transactions.

29 ⁴³ In STARsf, a participating member is required to place at least 60 percent of its ATMs in
 30 each state in the STARsf program. The member can place some or all of its ATM cards in the
 31 program. See, "STAR Network Operating Rules," *supra* note 10, at STAR00027460 and
 32 STAR00027501.

1 on alternative networks with positive interchange fees.⁴⁴ The ATM owner will have less
 2 incentive to join a network from which it receives less revenue, especially if the network allowed
 3 the issuer or network, rather than the ATM owner, to control routing. If the ATM owner were
 4 allowed to control routing, then it would have little incentive to route transactions over an ATM
 5 network with a lower interchange fee if a given transaction could also be routed over an ATM
 6 network with a higher interchange fee. This would also limit the ability of the lower interchange
 7 fee network to attract transactions and expand output.

8 52. An ATM network that is unable to offer attractive interchange fees to ATM
 9 owners will likely have significant difficulty attracting ATMs to the network. Interchange fees
 10 are a very significant portion of revenues for ATM owners. A recent study of ATM deployment
 11 found that interchange fees accounted for about 36 percent of revenues at on-premise ATMs and
 12 30 percent of revenues at off-premise ATMs.⁴⁵ A network with zero interchange fees would
 13 therefore be substantially less attractive to an ATM owner. This would be a particular concern
 14 for ISOs, which join ATM networks in order to gain access to profitable ATM transactions.
 15 Given these incentives, it is not surprising that, as mentioned above, all ATM networks in the
 16 United States appear to have always had positive interchange fees, both before and after the
 17 advent of surcharging.

18 53. Also not surprisingly, ATM networks pay close attention to their interchange fees
 19 and how they compare to those of other networks in attracting participants to the network. The
 20 Star network, for example, operated as follows:

21 On an annual basis we would convene a group of internal staff to review all of the
 22 fees, transaction fees, processing fees, membership fees. We would review what
 23 our competitors were doing. We would look at any new products or services that

24 ⁴⁴ ATM owners do not appear to use differential surcharges to any significant degree. (Some of
 25 this may be attributable to network rules that prohibit differential surcharges.) Even to the
 26 extent that some ATM owners are able and willing to impose differential surcharges to make
 27 up for the difference in interchange fee revenue, ATM networks subject to higher surcharges
 28 would likely be at a competitive disadvantage from the perspective of consumers.
 Cardholders may react negatively to a higher surcharge, especially if they know that they are
 paying a higher surcharge than other consumers. And as discussed above, some banks may
 prefer that their cardholders face lower surcharges than that which would prevail with a zero
 interchange fee.

45 “2006 ATM Deployer Study,” *supra* note 8, at 22.

were planned to come live in the next 12 months and what the fees should be for those, and we would come up with different scenarios of fee changes that would be considered. We then used those scenarios to analyze the impact to customers and to the company, and we would make recommendations first to the STAR senior management, STAR Network president, and then the network president in turn would present it to the STAR board.... For any given fee that we were reviewing, we would look at the rates that we charge and the rates that our competitors charge for the same activity or transaction.⁴⁶

54. Star was very focused on the competitiveness of its fee structure in appealing to participants:

[T]he switch fees and the interchange fees that were -- that were set by the Star Network were competitive with other networks that existed in the industry...Competitive switch fees and interchange fees, in our opinion, was very important to financial institutions in order to persuade organization -- financial institutions to do business with one particular network over another.⁴⁷

55. The Cash Station ATM network, which was operated primarily in the Midwest and was eventually consolidated with Star after the Concord acquisition, was also concerned with these same issues:

Senior management of the network Cash Station would examine our fees on an annual or biannual basis. It was not necessarily set on a calendar basis. We would look at -- examine competition, we would examine our disparate parties and interests and, as is the nature of regional networks, try to achieve an appropriate balancing act. Because without acquirers we don't have issuers, without issuers we don't have acquirers. And that has always been the tradition of trying to look at what's best for us competitively to serve our members and retain our members, all of our members, and examine small issuers, large issuers,

⁴⁶ See, Deposition of Elizabeth Lynn, In re: ATM Fee Antitrust Litigation, Master File No. C04-2676, taken on July 21, 2006, at 23: 9-23, and at 25: 12-15. Ms. Lynn is currently Senior Vice President of Strategy and Portfolio Management for First Data Debit Services, which includes the Star Network.

⁴⁷ See, Deposition of Nikki Waters, In re: ATM Fee Antitrust Litigation, Master File No. C04-2676, taken on July 20, 2006, at 40: 2-5, and at 42: 12-15. Ms. Waters currently works in the strategic Business development, prepaid group, commercial services division at First Data/Concord, and was previously Chief Marketing Officer for the Enterprise Payments Division, where she oversaw marketing for the debit group, which included the Star Network.

1 large acquirers, small acquirers, merchants, and try to achieve the appropriate
 2 balance and maintain the health and well-being of the network going forward.⁴⁸

3 56. The difference between the interchange fees on the MAC and Star networks
 4 shows how interchange fees can have a significant effect on ATM deployment on a network.
 5 When Concord, which operated the MAC ATM network, acquired Star in February 2001,
 6 MAC's ATM interchange fees were significantly lower than Star's.⁴⁹ MAC's interchange fee in
 7 its primary region in the eastern part of the United States for cash withdrawals was 37 cents for
 8 both on-premise and off-premise transactions, compared to Star's fee of 45 cents for on-premise
 9 and 55 cents for off-premise.⁵⁰ Star's analysis in trying to reconcile the differing fee structures of
 10 the two networks post merger found that "many deployers have not joined MAC because of low
 11 interchange fees."⁵¹ It also found that "the current STAR fee schedule has been very successful
 12 in encouraging the wide distribution of ATMs for the issuers."⁵² Star decided to use the existing
 13 higher Star interchange fees for cash withdrawals for MAC transactions as well.⁵³ This indicates
 14 that the interchange fee serves a strong procompetitive function for ATM networks as an
 15 instrument to balance the needs to attract issuers and ATM owners. This is true even in the
 16 presence of surcharging, which was well in place at this time.⁵⁴

17 57. In a world in which all ATM networks had to have a zero interchange fee, all else
 18 equal, there would be fewer ATMs available to consumers than there are today, and average

19 ⁴⁸ See, Deposition of G. Kirk Ergang, Jr., In re: ATM Fee Antitrust Litigation, Master File No.
 20 C04-2676, taken on June 30, 2006, at 37: 12-25, and at 38: 1-6. Mr. Ergang currently works
 in networks administration at Star.

21 ⁴⁹ "Concord EFS Completes Acquisition of Star Systems, Inc." Star Systems Press Release,
 22 February 1, 2001, available at http://www.star.com/february_1,_2001.aspx.

23 ⁵⁰ These are the MAC "East" interchange fees. See, McCarthy, Jim, "Pricing Committee," Star
 24 Presentation, May 10, 2001, at STAR00026880 and STAR00026882.

25 ⁵¹ Id. at STAR00026882.

26 ⁵² Id.

27 ⁵³ Id. at STAR00026883.

28 ⁵⁴ The growth of ATMs following the elimination of no-surcharge rules beginning in 1996 also
 29 illustrates the significant effect that changes in revenue streams can have on ATM
 30 deployment. The rate of ATM installation was much greater after 1996—the number of
 31 installed ATMs grew by about 18 percent for the five years following 1996, compared to 11
 32 percent for the 5 years preceding. See, McAndrews, James J., "ATM Surcharges," Current
 33 Issues in Economics and Finance, Vol. 4, Number 4, April 1998, at 3.

1 surcharges would be higher. Without interchange income, some ATMs would be uneconomic at
 2 feasible surcharge levels and would be removed. Others would become economic by raising
 3 surcharge levels. Any networks that existed would be unable to offer depository customers the
 4 level of convenience they enjoy today. Banks that use foreign fees to discourage use of
 5 competitors branches or as a revenue source might leave them at current levels for some or all
 6 customers.

7 **C. No Likely Anticompetitive Effects**

8 58. There is nearly universal agreement among economists that price-fixing cartels
 9 are anticompetitive because they raise prices to buyers and restrict output without offsetting
 10 efficiencies. Under the plaintiffs' theory, the bank members of Star are alleged to have conspired
 11 to have set ATM interchange fees, which plaintiffs characterize as price-fixing. As I have
 12 explained, however, the economic function of the interchange fee is not that of a price charged to
 13 buyers; rather it is an instrument used by the network to balance costs and benefits between the
 14 two sides—ATM card issuers and ATM owners—of the network.

15 59. Interchange thus provides significant efficiencies for ATM networks, and setting
 16 interchange is fundamentally different from a group of sellers fixing the price they will charge
 17 buyers. When a cartel raises price, output necessarily falls below the efficient level. A higher
 18 interchange fee, on the other hand, may well increase output. If the interchange fee is increased
 19 on ATM transactions, for example, then the revenues of ATM owners have increased while the
 20 costs of ATM card issuers have increased. The direct effect of increasing the interchange fee is
 21 therefore to change the relative profits on the two sides of the network. Allowing the network the
 22 ability to adjust the relative costs of participation on the two sides of the system permits it to find
 23 the right balance it needs to attract members on both sides, and thus to increase transactions
 24 volume between them. Thus raising the interchange fee in an ATM network may well increase
 25 output by increasing the attractiveness of the network to ATM owners.⁵⁵ Of course, in other
 26 circumstances, the network may want to lower interchange fees to appeal more to ATM card

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 55 I discuss this point with respect to payment cards in Evans and Schmalensee, *supra* note 2.

1 issuers. The point is that having the flexibility to set the interchange fee allows the network to try
 2 to find the right balance to enhance output and thus network value.

3 60. The output-enhancing effects of positive interchange are strongly indicated by the
 4 fact we have always observed similar fees in proprietary ATM networks. In this case,
 5 interchange offers no direct benefit to the network owner, whose profitability is plainly tied to
 6 increasing membership and output. The dominant incentive of a proprietary ATM network
 7 owner is to increase transaction volume, upon which it earns income, and increasing transaction
 8 volume is directly related to its ability to attract participation on both sides of the network. A
 9 proprietary ATM network owner would be unambiguously worse off were it to set the
 10 interchange fee unreasonably high and thereby reduce output. That is instructive here, because
 11 there is no principled reason to believe that the same business practice implemented for the same
 12 reasons in a joint venture ATM network would have different output effects.

13 61. It is also important to note that Star's members who participated in interchange
 14 fee setting were, in aggregate, net payers of interchange fees to the ISOs, which owned ATMs
 15 but did not issue cards (and thus did not pay interchange). ISOs accounted for about half of all
 16 installed ATMs in the United States in 2005.⁵⁶ Thus the plaintiffs' theory is that the alleged
 17 conspiracy consists of banks choosing to raise the prices the system charges them in order to
 18 raise its payments to non-participants in the conspiracy. This doesn't make economic sense as a
 19 theory of anticompetitive harm. Cartel members do not collude to raise their own costs in order
 20 to send money outside the cartel.

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⁵⁶ "2006 ATM Deployer Study," *supra* note 8, at 38.

1 62. I declare under penalty of perjury under the laws of the United States of America
2 that the foregoing is true and correct. Executed in Boston, Massachusetts on August 2, 2007.


Richard Schmalensee

APPENDIX A

APPENDIX A

Appendix A

CURRICULUM VITAE

Richard Schmalensee

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EDUCATION:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
S.B., Economics, Politics and Science, 1965
Ph.D., Economics, 1970

EMPLOYMENT:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
2007- Howard W. Johnson Professor of Economics and Management
2001-07 John C Head III Dean, MIT Sloan School of Management
1998-00 Dean, MIT Sloan School of Management (Interim, July-October 1998)
1996-98 Deputy Dean, MIT Sloan School of Management
1991-99 Director, Center for Energy and Environmental Policy Research
1988-99 Gordon Y Billard Professor of Economics and Management
1986- Professor, Department of Economics
1979- Professor, MIT Sloan School of Management
1977-79 Associate Professor, MIT Sloan School of Management
1970 Assistant Professor, MIT Sloan School of Management (Spring)
1967-69 Instructor, MIT Sloan School of Management

PRESIDENT'S COUNCIL OF ECONOMIC ADVISERS
1989-91 Member
1967 Junior Staff Economist (Summer)

UNIVERSITY OF CALIFORNIA, SAN DIEGO
1974-77 Associate Professor, Department of Economics
1970-74 Assistant Professor, Department of Economics

VISITING APPOINTMENTS:

2007 Distinguished Visiting Scholar, Tuck School of Business, Dartmouth (Fall)

1985-86 Visiting Professor, Harvard Business School
1985 Visiting Professor, CORE, University of Louvain, Belgium (Spring)
1980-81 Visiting Scholar, Department of Economics, Harvard University
1973-74 Visiting Associate Professor and Research Fellow, Department of Economics,
University of Louvain, Belgium

EDITORIAL SERVICE:

Editorial Board: *Journal of Economics and Management Strategy*, 1992-98
Associate Editor: *Journal of Economic Perspectives*, 1992-98
Associate Editor: *International Journal of Industrial Organization*, 1982-89
Board of Editors: *American Economic Review*, 1982-86
Founding Editor, 1978-89; Co-Editor, 1989-: MIT Press Series, *Regulation of Economic Activity*
Associate Editor, 1977-81; Board of Editors, 1981-89: *Journal of Industrial Economics*
Editor in Chief: *Competition Policy International*, 2005-

PROFESSIONAL ASSOCIATIONS:

American Economic Association: Executive Committee, 1993-95; Budget Committee, 1993-95;
Nominating Committee, 1987; Advisory Committee on Meetings Program, 1986, 1989, 1994
Econometric Society: Chair, Local Arrangements Committee, 1985 World Congress; Chair, Program
Committee, 1980 North American Fall Meeting; Program Committee, 1980 World Congress
Second World Congress of Environmental Economists, Program Committee, 2002

CONSULTATION AND GOVERNMENT SERVICE (SELECTED):

Market Platform Dynamics: Chairman, 2004-
LECG, LLC: Director, 2004-
National Academies/National Research Council: Panel on Transportation and a Sustainable Environment,
1994-97; Committee on National Statistics, 1998-2001; Panel on Cost-of-Living Indexes, 1999-
2001; Coordinating Committee on the Transition to Sustainability, 2000-2001
U.S. Environmental Protection Agency: Environmental Economics Advisory Committee, 1992-96, 1998;
Clean Air Act Compliance Analysis Council, 1992-98, Chairman 1992-96
Antitrust Division, U.S. Department of Justice, consultant, 1991-92 (1992 Merger Guidelines)
NERA Economic Consulting: Special Consultant 1981-89, 1991-2004
Bureau of Economics, U.S. Federal Trade Commission: consultant, 1972-81 (Antitrust Policy)

AWARDS AND OTHER PROFESSIONAL ACTIVITIES (SELECTED):

Member, National Commission on Energy Policy, 2006-
European Investment Bank Lecture, European University Institute, 2002
Fathauer Lecture in Political Economy, University of Arizona, 2000
Member, International Academy of Management, 1998-
Fellow: American Academy of Arts and Sciences, 1995-
Edward A. Hewett Prize, American Association for the Advancement of Slavic Studies (with P.L. Joskow
and N. Tsukanova), 1995
Revista de Análisis Económico Lecture, Econometric Society Latin American Meeting, 1994
Research Associate: National Bureau of Economic Research, 1992-
Board of Directors: Long Island Lighting Company, 1992-98; MIT Press, 1994-2007; International
Securities Exchange, 2000-; MFS Investment Management, 2002-04; International Data Group,
2004-

Donald Gilbert Memorial Lecture, University of Rochester, 1992
American Council for Capital Formation Center for Policy Research: Board of Directors, 1991-;
Environmental Policy Fellow, 1997-98
Fellow, Econometric Society, 1982-

BOOKS WRITTEN:

The Economics of Advertising (Vol. 80, Contributions to Economic Analysis), Amsterdam: North-Holland, 1972.

Applied Microeconomics: Problems in Estimation, Forecasting and Decision-Making, San Francisco: Holden-Day, 1973.

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BOOKS EDITED:

The Empirical Renaissance in Industrial Economics (ed., with T. F. Bresnahan), Oxford: Basil Blackwell, 1987.

Handbook of Industrial Organization, Vols. I & II (ed., with R. D. Willig), Amsterdam: North-Holland, 1989.

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"Consumer's Surplus and Producer's Goods." *American Economic Review*, 61 (September 1971): 682-687.

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APPENDIX B

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Appendix B

Schmalensee Interviews

Mike Clinard, Chief Operating Officer, Cardtronics.

David Cohen, Senior Vice President, Chase.

Ronald Congemi, Senior Vice President, First Data Corporation.

Jerry Garcia, Chief Information Officer, Cardtronics.

Jennifer Haag, Senior Vice President, Bank of America.

Ed Kadletz, Executive Vice President, Wells Fargo.

Dennis Lynch, Retired, Former President and CEO, NYCE, Defendants' industry consultant and expert.

Elizabeth Lynn, Senior Vice President, First Data Debit Services.

Ralph Perry, Retired, Former Executive Vice President, Wachovia.

James Walker, Senior Vice President, PNC Bank.

APPENDIX C

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Appendix C

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